

TEACHERS AND CURRICULUM

KAIAKO ME TE MARAUTANGA

EDITOR: CLIVE McGEE VOLUME 12 2011



TEACHERS AND CURRICULUM

EDITOR:

Clive McGee

EDITORIAL COMMITTEE:

Marilyn Blakeney-Williams

Nigel Calder Kerry Earl Philippa Hunter Dawn Penney Kirsten Petrie Merilyn Taylor Bill Ussher

VOLUME 12 2011

CONTENTS

COVER DESIGN

Donn Ratana

Notes for Contributors

Clive McGee

EDITORIAL

research

Anne Hume

2

3

LAYOUT AND DESIGN

Barbara Hudson

History in the New Zealand Curriculum: Discourse Shaping and Key Competencies Possibilities

Philippa Hunter 5

EDITORIAL CORRESPONDENCE AND MANUSCRIPTS SUBMITTED FOR PUBLICATION SHOULD BE ADDRESSED TO:

Research Manager
Wilf Malcolm Institute of Educational
Research

Faculty of Education The University of Waikato Private Bag 3105 Hamilton 3240.

email: wmier@waikato.ac.nz

Learning to think as an effective mathematics teacher: Teacher educator impacts on curriculum knowledge and learning to teach

Mary Hill, Lexie Grudnoff and Fiona Ell

13

Literacy and numeracy standards: Recent constructions within the political, business and media discourses in New Zealand

Margaret Walshaw and Roger Openshaw 23

Authentic Assessment in Performance-based Subjects John Williams and Dawn Penney

Ngarewa Hawera and Merilyn Taylor

31

41

49

1

http://education.waikato.ac.nz/research/

BOOKS FOR REVIEW SHOULD BE SENT TO: Research Manager

Wilf Malcolm Institute of Educational

Research

WEBSITE:

publication/

Faculty of Education The University of Waikato Private Bag 3105

Hamilton 3240.

email: wmier@waikato.ac.nz

Teachers' perspectives of professional development for effecting change in Māori medium classrooms: A mathematics experience

From classroom teacher to teacher educator: Generating PCK through action

uniales in the New Zeeland Cominglows What cause do student to also

The Principles in the New Zealand Curriculum: What sense do student teachers make of them?

Frances Edwards 57

BUSINESS CORRESPONDENCE:

orders, back orders, subscriptions, payments and other enquiries should be sent to:

TEACHERS AND CURRICULUM

Hamilton Education Resource Centre PO Box 1387 Hamilton

email: janh@waikato.ac.nz

A Critical Analysis Process - bridging the theory to practice gap in senior secondary school physical education

Lorna Gillespie and Sue McBain

65

Teacher Educators Talk About Enduring Understandings
Kerry Earl, Jenny Ferrier-Kerr and Bill Ussher 73

Rethinking The Role Of Counting In Mathematics Learning

Jenny Young-Loveridge 79

A Research Note: A Regional Response to National Concerns in Teacher Education Anne-Marie Hunt 85

SUBSCRIPTIONS:

within New Zealand \$25 (includes postage) overseas \$40 (includes postage)

COPYRIGHT:

Faculty of Education The University of Waikato **TEACHERS AND CURRICULUM** is an annual publication of the Faculty of Education, The University of Waikato, Hamilton, New Zealand.

It includes articles about curriculum issues, research in the area of curriculum and informed curriculum practice. Reviews of curriculum related books may also be included.

ISSN 1174-2208

NOTES FOR CONTRIBUTORS

Teachers and Curriculum provides an avenue for the publication of papers that:

- raise important issues to do with the curriculum
- · report on research in the area of curriculum
- provide examples of informed curriculum practice
- · review books that have a curriculum focus.

This peer reviewed journal welcomes papers on any of these from tertiary staff and students, teachers and other educators who have a special interest in curriculum matters. Papers on research may be full papers, or if time or space is at a premium, research notes, that is a 2,000 word summary.

SUBMITTING ARTICLES FOR PUBLICATION

The editorial committee encourages contributors to ask colleagues to comment on their manuscripts, from an editorial point of view, before submission for publication.

LENGTH

Manuscripts should not normally exceed 7,000 words, including references and appendices. An abstract must be provided. Abstracts should not be more than 100 words

METHOD OF SUBMITTING A PAPER

Please provide copy in 12 point type in a font compatible with the use of macrons (preferably Helvetica Maori or Times Maori) with line and a half spacing for the main text, and with 20 mm margins on all edges. Word files are preferred. Please do not include running headers or footers, Follow the style of referencing in the Publication Manual of the American Psychological Association (APA), 5th edition with references in a reference list at the end of the manuscript, rather than footnotes. Manuscripts not submitted in accordance with the above guidelines will be returned to authors for amendment.

COVERING LETTER

When submitting a manuscript to *Teachers and Curriculum*, authors must, for ethical and copyright reasons, include in a covering letter a statement confirming that (a) the material has not been published elsewhere, and (b) the manuscript is not currently under consideration with any other publisher.

DATE FOR SUBMISSION

Manuscripts may be submitted at any time.

COPYRIGHT

Copyright of articles published in *Teachers and Curriculum* rests with the Faculty of Education, The University of Waikato. Requests to reprint articles, or parts of articles must be made to the Editor via the Hamilton Education Resource Centre. Email: barbh@waikato.ac.nz

EDITORIAL

CLIVE MCGEE EDITOR 2011

This edition of Teachers and Curriculum is being published at a time of continuing change in curriculum in New Zealand and follows on the heels of the celebration of World Teacher's Day on 28 October 2011. Curriculum change in primary and secondary schools has accelerated in the years since the introduction of the revised New Zealand Curriculum (NZC) in 2007 and ongoing modifications to the National Certificate in Education al Achievement (NCEA). Since the revised NZC many schools have responded the "spirit" of the document. School leaders have correctly interpreted that NZC provides a national guideline about the general aspirations, values and goals of a broad educational experience for all students; and a guideline as to the content combinations that form the curriculum learning areas. They have picked up on the intention made clear in NZC that this guideline is the basis for the design and formulation of school-level curriculum. From the suggested achievement objectives and content arranged in eight levels, school-level decisions determine how the national guideline is used to provide a cohesive and sequential Year One to Thirteen curriculum.

Te Marautanga o Aotearoa for Maori medium schools and classrooms was finalised in 2008 as the second strand of the national curriculum revision. Ka Hikitia is a blueprint for future Maori educational achievement and there is a recent new policy outline for Pasifika education in schools. National Standards policy has recently impacted upon schools with Year One to Eight students and caused controversy over whether the need to attend to standards has taken some attention away from the ongoing attempts of teachers to understand the revised national curriculum and develop worthwhile classroom programmes. It is well known that adapting to revised curriculum can take considerable time. There is also concern that implementing the standards policy in reading, writing and mathematics may have taken away some of the curriculum autonomy gained under the revised NZC.

All of these changes can be followed in publications like the New Zealand Education Gazette and the Ministry of Education website Te Kete Ipurangi (TKI), both of which publish numerous examples of experimentation and innovation at the school level that provide evidence that school leaders and teachers have grasped the opportunities to innovate and experiment with curriculum topics and teaching and learning. Subject associations and teacher unions have also played a part in sharing ideas about new possibilities in curriculum design and development and classroom implementation. And there are numerous other publishers of resources to support teachers and students.

Against the backdrop of curriculum change this issue has papers that are of relevance to a wide-ranging audience of readers. A number of the papers focus on aspects of the curriculum in schools.

One of the issues in any national curriculum is the way subjects either occupy their own place or are clustered into a learning area. Either way it is generally accepted that to be included in a curriculum a case has to be made to justify its inclusion. Philippa Hunter has explored history as a subject in the curriculum. She looks at competing conceptions of the subject and the teaching of it and analyses the potential of key competencies in the national curriculum for mapping out a way forward for history as a subject. Margaret Walshaw and Roger Openshaw have addressed the recent reading, writing and mathematics standards policy. They point out debates over standards in schools are not new and they track the debates that preceded the latest policy. Their paper indicates how curriculum change – in this case standards – is politically and ideologically charged. Lorna Gillespie and Sue McBain also explore ideological curriculum influences in looking at the teaching

of senior secondary school physical education; in particular the recent gravitation towards a socio-cultural and critical orientation to teaching. They look at theory-practice links and suggest a pedagogical framework they call a Critical Analysis Process. Jenny Young-Loveridge examines the teaching and learning of counting in mathematics and suggests alternative approaches that might improve student achievement. She also makes links to the national standards in mathematics. John Williams and Dawn Penney report the findings from a three-year study in an Australian setting. The study was on the potential to use different forms of digital technology in the assessment of senior secondary school courses in engineering and physical education. They discuss associated issues including authenticity in the assessment of student learning in courses with substantial performance components in the learning.

Another group of papers is made up of topics that bridge across school curriculum and teacher education; neophyte teachers who are introduced to the field of school curriculum and in-service teachers adapting to curriculum change. In the context of science curriculum Anne Hume reports on her speculative attempts to develop a model of pedagogical content knowledge (PCK) learning in novice science teachers. Ways of adapting and applying the model by early career science teachers are suggested and discussed. A paper by Frances Edwards has its focus on initial teacher education and links with national school curriculum. It is a study of the extent to which primary school student teachers understood the principles in the national curriculum and how their understandings were linked to their own beliefs and practices. A paper that links initial and in-service teacher education is by Mary Hill, Lexie Grudnoff and Fiona Ell. They report on four case studies of novice teachers to trace their learning journeys as they moved through their teacher education and into teaching. The learning journey was the teaching of mathematics and the authors discuss the factors that impacted on the participants along the way and identify implications for teacher educators. Kerry Earl, Jenny Ferrier-Kerr and Bill Ussher explore compulsory papers in professional studies in initial teacher education and how what they term enduring understandings can be identified in the content of the papers. They critique the merits of an approach to tertiary teaching that is designed to improve student teacher learning.

A paper on teacher professional learning in mathematics curriculum looks at recent Maori medium national standards in mathematics. Ngarewa Hawera and Merilyn Taylor studied teachers in Maori medium schools to identify key factors that were related to the teachers' professional growth as they came to grips with understanding the standards and being able make modifications to their teaching approaches.

The final item is a research note by Anne-Marie Hunt that reports on a review of an initial teacher education programme that was offered in a regional city in response to local needs, and that was linked to a major provider.

This collection of papers represents explorations by authors of a range of issues that are related to recent changes in national curriculum policies and practices. Together, they are valuable in continuing the debates and discussions about recent changes. Rather than stop short of relating the debates to the realities of schools and teacher education, there are many examples – in the papers - of attempts to understand curriculum changes and develop ways of responding to changes by experimentation in school curriculum and teacher education curriculum. Therefore, the papers contribute to the advancement of curriculum ideas and teaching and learning approaches across the school and tertiary teacher education sectors.